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**OBJECTIVES:** To estimate the burden of disease and costs associated with smoking in Colombia. **METHODS:** Epidemiological data was retrieved from the National Administrative Department of Statistics (DANE), Integrated Information System on Social Protection (SISPRO) and National Survey of Substance abuse 2008 databases. Costs are expressed in 2012 prices and were obtained from local studies and regional approximations. A micro-simulation first order Monte Carlo model was constructed, incorporating natural history, costs and quality of life of the most important diseases related with smoking: stroke, Coronary Heart Disease (CHD), Chronic Obstructive Pulmonary Disease (COPD), and lung cancer. The model was programmed in Excel (Microsoft Excel ® Office Professional Edition 2003) with Visual Basic ® Macros (Microsoft Visual Basic® 6.3). A software package was installed to improve the random number generator function in Excel®. **RESULTS:** 15.9% of the total annual deaths in Colombia are attributable to smoking (6,776 heart disease, 6,619 COPD, 3,544 lung cancer and 1,831 stroke). Smoking is responsible for 112,891 hospital admission and it is estimated that 10,606 people are diagnosed annually with cancer caused by smoking. The direct health care costs associated with smoking is USD$ 1.692 million dollars (USD$863,103,308 heart diseases, USD$442,619,734 COPD, USD$ 170,000,285 lung cancer and USD$216,852,028 stroke). **CONCLUSIONS:** Smoking is directly responsible for the loss of 674.262 lives each year in Colombia and generates an annual direct health care cost of more than 4 billion Colombian pesos, equivalent to 0.6% of Colombian GDP and 10.5% of health care spending. These results could be useful for decision makers to reinforce public policies regarding smoking cessation in Colombia.

## PCN42

### BUDGET IMPACT ANALYSIS OF BEVACIZUMAB AND ANTI-EGFR WITH CHEMOTHERAPY FOR FIRST AND SECOND LINE TREATMENT OF METASTATIC COLORECTAL CANCER IN RUSSIAN FEDERATION

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**OBJECTIVES:** To estimate the budget impact of bevacizumab combinations in the metastatic colorectal cancer (mCRC) treatment and chemotherapy with anti-EGFR for first and second line according to the Russian health care system. **METHODS:** The budget impact analysis was conducted. Direct expenses associated with mCRC and resulting follow-up costs were calculated using general tariff agreement of Russian statutory health insurance and official national statistics (accepted exchange rate was 1 $ = 30 RUB). **RESULTS:** Bevacizumab treatment combinations in the mCRC therapy provided cost saving benefits compared with chemotherapy with anti-EGFR for first and second line therapy. Total health care costs of mCRC therapy were approximately 1 187 115 RUB (39 571 $) in bevacizumab+FOLFIRI 1 line therapy, 662 242 RUB (22 075 $) in bevacizumab+CAPOX 2 line therapy and 2 518 311 RUB (83 944 $) in cetuximab+FOLFIRI 1 line therapy, 872 226 RUB (29 074 $) in bevacizumab+FOLFOX4 2 line therapy. Treatment of mCRC using bevacizumab treatment combinations compared to chemotherapy with anti-EGFR leads to cost savings of 1 541 181 RUB (51 373 $). **CONCLUSIONS:** The results of budget impact analysis illustrate that bevacizumab treatment combinations in the mCRC treatment in comparison with chemotherapy with anti-EGFR has potential to reduce Russian health care system total costs for mCRC treatment.

## PCN43

### BUDGET IMPACT ANALYSIS FOR NILOTINIB USE IN THE TREATMENT OF CHRONIC MYELOID LEUKEMIA IN COLOMBIA

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**OBJECTIVES:** To analyze the budget impact of the use of nilotinib in first and second line chronic myeloid leukemia (CML), compared with imatinib and dasatinib, from the perspective of a third party payer in Colombia. **METHODS:** A Markov model was developed with a 5-year time horizon simulating first and second line treatment of CML patients, with treatment options including nilotinib, imatinib and dasatinib. 2013 incidence and prevalence figures were estimated from international data. Base case market share for each compound was obtained from public national medicines registry (Sismed) for the years 2012 – 2013. Resource utilization and costs of medicines, health care services and adverse events were estimated according to clinical trials data and local health care provider databases. The analysis estimated up to 80% market share for nilotinib in both lines. A univariate sensitivity analysis was developed to identify the effect of individual parameter variation on final results. **RESULTS:** Nilotinib inclusion as a first and second line treatment option for CML patients resulted in a cumulative impact of COP $14.961 million over 5 years, corresponding to a 0.056% per capita premium (UPC) in the Colombian care health system. Year to year, the impact was calculated from COP $1,168 million to COP $6,588 million on the fifth year. The sensitivity analysis showed the costs of technologies, health care services and disease progression as the most relevant variables. **CONCLUSIONS:** The budget impact analysis showed that increasing the use of nilotinib both in first and second line treatment of CML patients poses a minimal impact on the Colombian health care system, within parameters similar to those used in 2012 for the inclusion of technologies in the benefit plan. Additional benefits in lower progression rates and potential increased survival may favor this technology to be reimbursed within the premium (UPC) in Colombia.

## PCN44

### BUDGET IMPACT ANALYSIS OF CRIZOTINIB AS TREATMENT OF ANAPLASTIC LYMPHOMA KINASE (ALK) POSITIVE ADVANCED NSCLC IN PANAMA

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**OBJECTIVES:** The purpose of this model is to examine the budgetary impact of the decision to reimburse crizotinib for patients with ALK+ve advanced non-small-cell lung cancer (NSCLC). **METHODS:** A Markov Model was developed to evaluate the disease progression of a cohort of patients with ALK +ve advanced NSCLC in a three year period, that will be treated with Crizotinib. The model compares scenarios With and Without Crizotinib. The difference in total costs is the net impact of Crizotinib on the health care budget. Local epidemiologic data was used. Costs were estimated from Panama Public Health System ($US, 2012) and included costs of treatment, administration and monitoring, palliative care, and severe adverse events. The base case scenario assumes 100% testing rate for ALK in incident patients and 100% market share for crizotinib in ALK+Ve advanced NSCLC patients. Sensitivity analyses were performed for 80-100% market share [3] **RESULTS:** In a three year period, 23 patients received Crizotinib (from a cohort of 609 advanced NSCLC patients). Cost related to drug acquisition and management of adverse in a world "With" and "Without" Crizotinib during three years are $13.426.918 and $12.670.537 respectively which represents $756.381 of budget impact associated with the insertion of Crizotinib in the market, however it shows savings in terms of drug administration, monitoring costs and progression cost, with an estimated of $471.952 (Difference between the two scenarios of $3.931.399 and $4.403.351). Net budget Impact for the three year period is $284.428, which represents for the first year ($48.997, $0.0018 per patient-per month [PMPM]) approximately 0.00289% of Panama's Total Public Health Expenditure (2011). [4] If the Crizotinib market share is assumed to be 80%, the net impact was $92.996. **CONCLUSIONS:** Crizotinib for the treatment of ALK+ NSCLC patients has a minimal incremental budget impact on the overall expenditure within the Panama Health System.

## PCN45

### A BUDGET IMPACT MODEL FOR THE INTRODUCTION OF BEVACIZUMAB FOR THE TREATMENT OF NEWLY DIAGNOSED GLIOBLASTOMA MULTIFORME IN THE UK

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**OBJECTIVES:** Newly diagnosed glioblastoma multiforme (GBM) is associated with poor prognosis and limited treatment options. The placebo controlled AVAglio study demonstrated that the addition of bevacizumab to radiotherapy (RT) plus temozolomide (TMZ) improves progression-free survival (PFS) by 4.4 months, and maintains health-related quality of life in patients with newly diagnosed GBM. A budget impact model (BIM) has been developed to calculate the costs associated with the introduction of bevacizumab for the treatment of newly diagnosed GBM in the UK. **METHODS:** The BIM is based on UK epidemiological and resource data and compares a base case in which all eligible patients are treated with radiotherapy + TMZ only with a scenario in which bevacizumab is introduced with increased uptake over a three year period. The model combines drug, adverse events, and administrative costs to estimate the total cost of treating the eligible patient population in the UK using published sources converted into £ (2013). **RESULTS:** The BIM estimates that, in year 1, with an expected 10% uptake of bevacizumab, the total cost would be £5,619,457, £11,463,690 in year 2, with an expected uptake of 20%, and £16,688,655 in year 3, with an expected uptake of 30%. When these costs are considered in the context of the total oncology costs for the UK in 2013, the budget impact of the introduction of bevacizumab in years 1, 2 and 3 is 0.08 %, 0.17% and 0.25%, respectively. When the costs related to bevacizumab alone are considered in the context of the total oncology drug budget for the UK in 2013, the costs for bevacizumab for years 1, 2 and 3 are 0.42%, 0.95 % and 1.43% of the budget, respectively. **CONCLUSIONS:** The introduction of bevacizumab for the treatment of newly diagnosed GBM in the UK is associated with a low budget impact.

## PCN46

### BUDGET IMPACT ANALYSIS OF BEVACIZUMAB PLUS CHEMOTHERAPY VERSUS BEVACIZUMAB AND ANTI-EGFR WITH CHEMOTHERAPY FOR FIRST AND SECOND LINE TREATMENT OF METASTATIC COLORECTAL CANCER IN RUSSIAN FEDERATION

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**OBJECTIVES:** To estimate the budget impact of bevacizumab plus chemotherapy for first and second line metastatic colorectal cancer (mCRC) treatment compared with chemotherapy with anti-EGFR for first line and bevacizumab plus chemotherapy for second line according to the Russian health care system. **METHODS:** The budget impact analysis was conducted. Direct expenses associated with mCRC and resulting follow-up costs were calculated using general tariff agreement of Russian statutory health insurance and official national statistics (accepted exchange rate was 1 $ = 30 RUB). **RESULTS:** Bevacizumab plus chemotherapy for first and second line in the mCRC therapy provided cost saving benefits compared with chemotherapy with anti-EGFR for first line and bevacizumab plus chemotherapy for second line. Total health care costs of mCRC therapy were approximately 1 145 826 RUB (38 194 $) in bevacizumab+FOLFOX 1 line therapy, 544 905 RUB (18 164 $) in bevacizumab+FOLFIRI 2 line therapy and 2 957 187 RUB (98 573 $) in panitumumab+FOLFOX4 1 line therapy, 872 226 RUB (29 074 $) in bevacizumab+FOLFOX4 2 line therapy. Treatment of mCRC using bevacizumab treatment combinations compared to chemotherapy with anti-EGFR leads to cost savings of 2 138 681 RUB (71 289 $). **CONCLUSIONS:** The results of budget impact analysis illustrate that bevacizumab treatment combinations in the mCRC treatment in comparison with chemotherapy with anti-EGFR has potential to reduce Russian health care system total costs for mCRC treatment.

## PCN47

### PROJECTED CLINICAL, RESOURCE, AND BUDGET IMPACT OF IMPLEMENTING LOW-DOSE COMPUTED TOMOGRAPHY LUNG CANCER SCREENING IN THE UNITED STATES

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